

REMARKS

Applicants hereby acknowledge the Examiner's withdrawal of the prior provisional double patenting rejections due to the terminal disclaimers filed February 7, 2006.

Applicants further acknowledge the Examiner's withdrawal of the prior rejections of record under 35 U.S.C. 112 and 35 U.S.C. 103(a).

The Examiner has rejected claims 1-21, 27-33, 35-38 and 40 under 35 U.S.C. 103(a) over U.S. patent 5,139,878 (Kim et al.) in view of U.S. patent 6,214,476 (Ikeda et al.). It is respectfully submitted the rejection is not well taken. The proposed combination of the Kim et al. and Ikeda et al. references fails to teach or suggest the presently claimed invention.

The invention provides a shaped article for storing liquid food products, solid food products, medical products or pharmaceutical products, the shaped article being formed from a multilayer inner fluoropolymer layer/ adhesive tie layer/ outer thermoplastic polymer layer structure, which adhesive tie layer comprises a combination of at least one tackifier, at least one ethylene/alpha-olefin copolymer and optionally at least one styrenic block copolymer. Also provided is a shaped article for storing liquid food products, solid food products, medical products or pharmaceutical products, the shaped article being formed from another different multilayer structure which comprises a first outer thermoplastic polymer layer/ first adhesive tie layer/ central fluoropolymer layer/ second adhesive tie layer/ second outer thermoplastic polymer layer structure.

The adhesives that are employed in the shaped articles of the invention are useful in adhering layers of dissimilar polymeric materials that are otherwise incompatible and achieve a significantly improved interlayer bond strength between a fluoropolymer layer and a thermoplastic polymer layer. Ikeda et al. does not teach or suggest the adhesive compositions as amended. Together, Kim et al. and Ikeda et al. fail to teach or suggest

the shaped articles of the invention which are for storing liquid food products, solid food products, medical products or pharmaceutical products.

Kim et al. teaches multilayer film structures comprising at least one fluoropolymer film, at least one thermoplastic polymer film, and at least one adhesive layer selected from the group consisting of alkyl ester copolymers of an olefin and an α,β -ethylenically unsaturated carboxylic acid, modified polyolefins comprising an olefin and a functional moiety selected from the group consisting of unsaturated polycarboxylic acids and acid anhydrides, and blends of the alkyl ester copolymers and the modified polyolefins. These adhesive compositions are different than the adhesives described by Applicants' claimed invention. *Particularly, as the Examiner acknowledges, Kim, et al. fails to teach an adhesive composition that includes a tackifier. The Kim, et al. reference also fails to teach an adhesive composition that includes a styrenic block copolymer.*

It is unclear to Applicants if the Examiner accepted Applicants' explanation that Kim et al. does not teach styrenic block copolymers. On page 5 of the Office Action, the Examiner again directs the Applicants to the disclosure at col. 5, lines 53-59 of Kim et al. as evidence that Kim et al. discloses a styrenic block copolymer component of their adhesive composition. However, on page 8 of the Office Action, the Examiner acknowledges that Kim et al. fails to teach a styrenic block copolymer as claimed in claims 13, 18 and 32. For the record, it is submitted that the materials from col. 5, lines 53-59 are not block copolymers, but rather, are random copolymers. More particularly, the random copolymers the Examiner points to are diene rubbers, not styrenic block copolymers. These random copolymers are chemically different compounds and have different properties than block copolymers. They are not mere substitutes for one another. For example, random copolymers and block copolymers have different thermal behavior, wherein block copolymers exhibit an order-disorder transition and random block copolymers do not. More importantly, random copolymers have poor compatibility with ethylene/ α -olefin copolymers. In contrast, styrenic block copolymers have good compatibility with ethylene/ α -olefin copolymers. It is respectfully submitted that one

skilled in the art would not look to the different random copolymers of Kim et al. to arrive at the adhesive compositions of the claimed invention which include styrenic block copolymers having significantly different properties. Even if one was to assume hypothetically that the diene rubbers of col. 5, lines 53-59 were styrenic block copolymers, Kim et al. certain fails to teach or suggest the particular styrenic block copolymers of the invention which each have two styrene end-blocks and a non-styrene mid-block. Accordingly, Kim et al. does not teach adhesive compositions that include both an ethylene/alpha-olefin copolymer and a styrenic block copolymer, or more particularly adhesive compositions that comprise a combination of an ethylene/alpha-olefin copolymer, a styrenic block copolymer and a tackifier.

As stated above, the Examiner acknowledges that Kim, et al. fails to teach an adhesive composition that includes a tackifier. To fill this void, the Examiner currently looks to the disclosure of Ikeda et al. which describes compositions useful for bonding fluoropolymers to substantially non-fluorinated polymers. However, it is respectfully submitted that Ikeda, et al. fails to overcome the differences between Kim et al. and the claimed invention.

Ikeda et al. teaches specific adhesive compositions which include a modified and hydrogenated block copolymer, a tackifier, and optionally an ethylenic polymer that may be an ethylene- α -olefin copolymer. *Ikeda et al. does not describe film structures that include a fluoropolymer layer.* It is respectfully submitted that the Examiner has improperly combined the references. Importantly, there is no teaching or suggestion in either reference to combine the multilayer structures disclosed by Kim et al. with the adhesive compositions described by Ikeda et al. While Kim et al. does describe fluoropolymer layer containing multilayer film structures, their structures do not incorporate adhesive tie layers that may include a tackifier, nor do they teach adhesive tie layers that may include a styrenic block copolymer. More importantly, Kim et al. fails to teach or suggest an adhesive tie layer composition that may comprise a combination of an ethylene/alpha-olefin copolymer, a tackifier and a styrenic block copolymer.

In determining a *prima facie* case of obviousness, it is necessary to ascertain whether or not the reference teachings would appear to be sufficient for one of ordinary skill in the relevant art having the reference before him to make the proposed substitution, combination, or other modification. *In re Linter*, 458 F.2d 1013, 1016, 173 USPQ 560, 562 (CCPA 1972). To do so, the applied prior art must be such that it would have provided one of ordinary skill in the art with both a motivation to carry out the claimed invention and a reasonable expectation of success in doing so. *See In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438, 1442 (Fed. Cir. 1991); *In re O'Farrell*, 853 F.2d 894, 902, 7 USPQ2d 1673, 1680 (Fed. Cir. 1988). The Ikeda et al. and Kim et al. references fail to provide such motivation, particularly with a reasonable expectation of success. *Moreover, there is no evidence in the Ikeda et al. reference that their adhesive compositions would even be compatible with fluoropolymer, let alone have a reasonable expectation of success to adhere fluoropolymer layers with other polymeric layers.*

The Examiner states that the combination of Kim et al. and Ikeda et al. is proper because the adhesive of Ikeda et al. is described as useful in film packaging materials for pharmaceutical products, further stating that it would have been obvious to one skilled in the art that using an adhesive comprising a styrenic block copolymer and a tackifier in addition to an ethylene/alpha-olefin copolymer as a substitute for the Kim et al. adhesive to eliminate the problem of heating during coextrusion lamination as taught by Ikeda et al. It is respectfully submitted that the Examiner has applied an incorrect standard of patentability. The standard for combining references is not whether or not the references apply to similar fields of art, but whether there is sufficient motivation in the references to support their combination.

Where claimed subject matter has been rejected as obvious in view of prior art references, a proper analysis under 35 U.S.C. 103 requires consideration of two factors: (1) whether the prior art would have suggested to those of ordinary skill in the art that they should make the claimed composite or device or carry out the claimed process; and (2) whether

the prior art would also have revealed that in so making or carrying out the claimed invention those of ordinary skill would have a reasonable expectation of success. See *In Re Dow Chemical Company* 837 Fed. 2d 469, 473, 5 USPQ 2d 1529, 1531 (Fed. Cir.

Applicants respectfully assert that such a suggestion and/or reasonable expectation of success could not be found in the cited references. Neither Kim et al., nor Ikeda et al., taken singularly or in combination, teach or suggest the claimed subject matter. The Patent and Trademark Office Board of Appeals and Interferences stated the following in *Ex parte Clapp*, 227 USPQ 972 (1985), at page 973:

Presuming arguendo that the references show the elements or concepts urged by the Examiner, the Examiner has presented no line of reasoning, and we know of none, as to why the artist when viewing only the collective teachings of the references would have found it obvious to selectively pick and choose various elements and/or concepts from the several references relied on to arrive at the claimed invention. In the instant application, the Examiner has done little more than cite references to show that one or more elements or some combinations thereof, when each is viewed in a vacuum, is known. The claimed invention, however, is clearly directed to the combination of elements. That is to say, applicant does not claim that he has invented one or more new elements but has presented claims to a new combination of elements. To support the conclusion of the claimed combination is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed combination where the Examiner must present a convincing line of reasoning as to why the artist would have found the claimed invention to have been obvious in light of the teaching of the references.

With the above directives, consideration must be given as to whether the combination of references in the manner set forth in the Office Action is proper to render the applicant's invention obvious in view thereof. As set forth hereinabove, Applicants respectfully assert that the references do not teach or suggest the combination as set forth in the claims, as is evident from the plurality of differences between applicant's invention and the cited art. Again, the combination of references must teach the claimed combination to render applicant's claimed invention obvious under 35 U.S.C. 103.

Applicants submit that the Examiner is looking beyond the teachings of the references. Particularly, the belief that one skilled in the art **could** use a different adhesive tie layer than the materials described in Kim et al. to form the claimed shaped articles does not suggest that one **should** form such an article to obtain the disclosed benefits. The mere fact that references **can** be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990). Such a suggestion is absent in each of the references. Accordingly, it is respectfully submitted that one skilled in the art would not look to the Ikeda et al. reference in combination with the Kim et al. reference to arrive at the presently claimed invention.

It is respectfully submitted that the Examiner is reconstructing the art in light of Applicants' disclosure. The point in time that is critical for an obviousness determination is at the time the invention. "To imbue one of ordinary skill in the art with knowledge of the invention in suit, when no prior art reference or references of record convey or suggest that knowledge, is to fall victim to the insidious effect of a hindsight syndrome wherein that which only the inventor taught is used against its teacher." *W.L. Gore & Assocs., Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1553, 220 USPQ 303, 312-13 (Fed. Cir. 1983). Obviousness cannot be established by hindsight combination to produce the claimed invention. *In re Gorman*, 933 F.2d 982, 986, 18 USPQ2d 1885, 1888 (Fed. Cir. 1991). It is the prior art itself, and not the Applicants' achievement, that must establish the obviousness of the combination. Where Applicants' teachings are needed to find the invention, the invention is not obvious.

Additionally, it is firmly established that in determining the differences between the prior art and the claims, the question under 35 U.S.C. 103 is not whether the differences themselves would have been obvious, but whether the claimed invention as a whole would have been obvious. *Stratoflex, Inc. v. Aeroquip Corp.*, 713 F.2d 1530, 218 USPQ 871 (Fed. Cir. 1983); *Schneck v. Nortron Corp.*, 713 F.2d 782, 218 USPQ 698 (Fed. Cir.

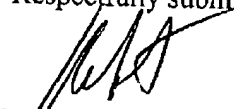
1983). It is respectfully asserted that the invention as a whole would not have been obvious to one of ordinary skill in the art at the time the invention was made.

As set forth hereinabove, it is respectfully submitted that neither of the Kim et al. or Ikeda, et al. references, either alone or in combination, teach or suggest the claimed invention. For these reasons, it is respectfully submitted that the rejection is incorrect and should be withdrawn. Such action is requested.

In addition, since the method claims contain all of the limitations of the article claims, Applicants respectfully request that the withdrawn method claims be rejoined under In Re Ochiai 37 USPQ2d 1127 and In re Brouwer 37 USPQ 1663.

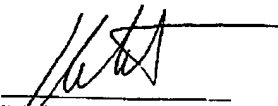
The undersigned respectfully requests re-examination of this application and believes it is now in condition for allowance. Such action is requested. If the examiner believes there is any matter which prevents allowance of the present application, it is requested that the undersigned be contacted to arrange for an interview which may expedite prosecution.

Respectfully submitted,



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I hereby certify that this paper is being facsimile transmitted to the Patent and Trademark Office (FAX No. 571-273-8300) on April 26, 2006



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